

INTERNATIONAL PRELIMINARY International application No. PCT/EP 03/50903
EXAMINATION REPORT – SEPARATE SHEET

Reference is made to the following documents:

10/535673

- D1: EP-A-0 340 096 (SFENA) 2 November 1989 (1989-11-02)
D2: EP-A-0 345 029 (TALIQ CORP) 6 December 1989 (1989-12-06)

Regarding point V

1. As already indicated in the description of the present patent application, the invention claimed constitutes an improvement of the display system, with incorporated touch surface, as patented in D1 (D1 has as priority French patent FR 88 05665 cited in the application).

This document D1, which is therefore regarded as being the state of the art closest to the subject matter of the first claim, describes:

a display device, the surface of the device being rendered touch-sensitive, the device comprising a first part comprising two insulating plates a layer of material exhibiting electro-optical properties able to render all or part of its surface visible under the effect of an electrical control signal, the first electrode being disposed on a face of one of the insulating plates, a second electrode disposed on a face of the other insulating plate opposite at least one first electrode (D1, column 2, lines 32 to 43), characterized in that the second electrode is used as responsive element of the touch-sensitive surface of the device (D1, column 3, lines 25 to 40), and in that the area of the second electrode is greater than the area or the sum of the areas of the first electrode or electrodes opposite (D1, figure 1 and 3, column 4, lines 3 to 8).

Consequently, there are two differences between the subject matter of claim 1 and the device known from D1.

- a) The first part of the claimed device is dedicated and its first electrode has the form of a pictogram.

It is well known to persons skilled in the art that in display devices using a material with electro-optical property the dedicated technique, on the one hand and the technique based on an active matrix, on the other hand are

exchangeable, although each of these two techniques has a certain advantage over the other. This point of view is confirmed in the description of the present patent application (page 1, line 33 to page 2, line 6) and in document D2 (column 5, lines 37 to 60). For this reason, the person skilled in the art would certainly consider also using the technique of dedicated display instead of the one based on an active matrix. For this reason, these characteristics do not afford an inventive step to the device claimed.

It should be noted that the description of the present application (page 1, line 33 to page 2 line 11) mentions certain problems in the case of applying the principle known from D1 in a dedicated display device. In particular, it is indicated that the size of the counter-electrodes cannot simply be adapted to the dedicated pictograms. However, it is clear from D1 that the form of the counter-electrode is not identical to that of a first electrode but may be chosen as a function of the resolution of detection desired (D1, column 2, lines 52 to 60). It is also indicated in D1 that the interstices between the counter-electrodes must be as small as possible (D1, column 3, lines 1 to 6) so as not to decrease the resolution of the display. However, in a dedicated device this problem does not arise, since the distances between the first electrodes are appreciably greater than between the pixels of a display as described in D1.

- b) It is specified that the second electrode of the claimed device has an area of 9 mm^2 .

It is already indicated in D1 (column 2, lines 56 to 58) that the area of this electrode must be determined as a function of the resolution of the detection desired. From this, it is clear to the person skilled in the art that the area must be chosen as a function of the responsivity of the detection system and also of the area of the object which will be used to effect the touch-sensitive contact. For this reason, the value of the area cannot be chosen arbitrarily but stems automatically from the parameters indicated hereinabove. For this reason, the characteristic of a second electrode of 9 mm^2 does not render the first claim inventive.

For this reason, the first claim does not satisfy the requirements of Article 33(3) PCT, since it does not manifest any inventive step.

2. Apparently, the combination of the characteristics for claims 1 and 2 would not seem to be included within the state of the art and would not seem to stem therefrom in an obvious manner.

In particular, although the diverting of the second electrode opposite the feed pad of the first electrode or electrodes would appear to be a simple solution in respect of the problem of parasitic images, there is no teaching for the person skilled in the art in this direction in the documents cited in the search report. On the other hand, document D1 proposes a different solution (D1, column 2, line 61 to column 3, line 6).

Consequently, a new independent claim, comprising the characteristics of claims 1 and 2, would satisfy the requirements of Article 33 PCT.